Work Orde		901		*979	າ∩1*							Page 1	
Revision ID:	D3065-3 Step Spacer			Accept	*N900	040	100	ገ*	Setup	Start Stop	*N: *N:	S1* S2*	
Start Date: Required Date: Reference:	3/01/13 4/08/13	Start Qty: 40.00 Req'd Qty: 40.00	*40* *40*		Cust Item 1 Customer:	ID:	•						
Approvals:	Process Pla	n: MLJ	Date: 15-03-04	Tooling: SPC (Y/N):		ate:		1	Run	Start Stop	*N  *N	R1* R2*	·
Sequence ID/ Work Center II	)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp	-
Draw Nbr	Rev	ision Nbr											<del>-</del> -
D3065	Rev	В											
*100 *100* Waterjet		FLOW WATER JET  Memo		0.00				40				045 05	13.05.05
FLOW CNC Waterje	et	1-Cut as per if necessary	Dwg D Dwg Rev: B	Prog Rev: B	_ 2-Deburr					,			
110		QC2- Inspect parts off m	achine FAI/FAIB	0.00				.1.			(	0AS)	,
*110* QC Quality Control	·	Memo		0.00				40	<del></del>				3.05.05
				,									
120		QC8- Inspect parts - seco	ond check	0.00	<b>7</b>			1,2					
*120* QC Quality Control		Мето		0.00 3		,		Coun	) 				

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											DQA:	Date	2:
NCR:	Yes	/ No				WORK ORDER NON-	cor	NFORM	MANCE / UPDATE		04.65	Date	
						T	-		3		QA Closed:	Date	2.
) W = 1, O = 1						DISPOSITION			AGAIN	ST DE	PARTMENT/	PROCESS	
Work Ord	er:				· · · · · · · · · · · · · · · · · · ·	Rework	1		Skid-tube Crosstu	be		Water Jet	Engineering
Part	Nο					Scrap	1		Machining Small F	<del></del>	Prod	d. Eng. Coor.	Quality
, are		-				Use-as-is	1		noforming Finish	ng	Rec/Stor	e/Packaging	Other
NCR	No.	·				Work Order Update			Large Fab Compos	ite		Supplier	
Doot			1	1	Doccri	ption of work order update		Initial	Action		Sign &		
Root Cause		Date	Step	Qty		or Non-conformance	1	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data		Date	Step	Qty		or Horr comormance	1	met Eng					
Equip/Tooling	H												
Operator	H												
Material													
Setup									,				
Other	П												
Process .							1						
Supplier	17		1										
Training							İ						
Unapproved													
						F	AUI	LT CATE	GORY				
Land	ing (	Gear				General		7			1 .	F	· ¬
		Bending				Bend	$\perp$	Grain		_	Ovalized	<u> </u>	Pressure/Forced
	L	Centre N	ot Conce	ntric to C	D/S	BOM/Route	<u> </u>	Hardwa			Over/Under	h	Temperature/Cure
		Cracks			<u> </u>	Broken/Damaged	<u> </u>	4 '	on Incomplete	_	Part Incorre	j-	Weld
	_	Crushed/	Crimped			Burrs	_	-	ions Incomplete/Unclear	$\vdash$	Part Lost/M	issing [	Wrong Stock Pulled
	-	Cuffs			_	Contamination	$\perp$	Mainte		<u> </u>	Part Moved		-
		Heat Trea	ət			Countersink	L	Mislabe		-	Positioned V		<del></del>
	$\Box$	Inspectio	n Strip in	Tube		Cut Too Short		Misread	t	L	Power Loss/	Surge	Other
		Ripples ir	n Bend		.	Drill Holes	L	Offset					

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

Work Orde March-01-13 1:		901		*970	)N1*							Page 2
Revision ID:	D3065-3 Step Spacer			Accept	*N900	<b>040</b>	100	)*	Setup	Start Stop	171.	S1* S2*
Start Date: Required Date: Reference:	3/01/13 4/08/13	Start Qty: 40.00 Req'd Qty: 40.00	*40* *40*		Cust Item I Customer:	D:						
Approvals:		an:				ate:			Run	Start Stop	1/1	R1* R2*
Sequence ID/ Work Center II 130 *120* Small Fab Small Fab		Operation Description  Small Fab  Memo Deburr Stack		Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty	t Re Qt	•	Reject Number	Insp. Stamp
140 <b>*140 *16</b> Brake NC  Brake NC		NC BRAKE  Memo  Bend as per I	Owg D3065	0.00				42			/	8 (3)
150 *150* QC Quality Control		QC5- Inspect part comple	teness to step on W/O	0.00 \$ \$	7			40 Coul	<b>1</b> −			

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					•				•		DQA:	Date	
NCR:	Yes	/ No				WORK ORDER NON-	100	NFORN	MANCE / UPDATE		•		
											QA Closed:	Date	
Work Orde	or:					DISPOSITION			AGA	NNST DE	PARTMENT	PROCESS	
Work Ordi	E1.	<del></del>				Rework	7		Skid-tube Cross	stube		Water Jet	Engineering
Part I	No.					Scrap	1		<u> </u>	II Fab	Pro	d. Eng. Coor.	Quality
	•					Use-as-is		Therm	~ <b>—</b>	shing	Rec/Stor	e/Packaging	Other
NCR I	No.			· · · · · · · · · · · · · · · · · · ·		Work Order Update	_		Large Fab Comp	osite		Supplier	
Root	-				Descri	iption of work order update		Initial	Action		Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data											ļ		
Equip/Tooling								ĺ					
Operator	_						ĺ						
Material	<u> </u>												
Setup	<u> </u>		ļ				1						
Other	_										ļ		
Process	<u> </u>			·									
Supplier	-												
Training	-												
Unapproved	L	<u> </u>	L	<u> </u>	<u> </u>		AUI	LT CATE	GORY	<del></del>	<u>.                                    </u>	<u> </u>	1
Landi	ing (	Gear			<del></del>	General							
•	Ŭ	Bending			Γ	Bend		Grain			Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
		Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/Unclear		Part Lost/M	issing	Wrong Stock Pulled
		Cuffs	-			Contamination		Mainte	nance		Part Moved		
		Heat Trea	at			Countersink		Mislabe	led		Positioned \	Wrong	
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	I		Power Loss,	/Surge	Other
		Rinnles in	•			Drill Holes		Offset			_	_	

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing Finish

Folio

	Work Order ID 97901 Narch-01-13 1:50:00 PM			*979					Page 3		
Item ID: Revision ID:	D3065-3			Accept	*N900	<u>040</u> ′	ነበበነ	r s	Setup Sta	17	IS1*
Item Name: Start Date: Required Date: Reference:	Step Spacer 3/01/13 4/08/13	Start Qty: 40.00 Req'd Qty: 40.00	*40* *40*		Cust Item Customer:	ID:					
Approvals:	Process Pla	an:	Date:	Tooling:	D	ate:		R	Run Sta		IR1*
	QC:		Date:	_ SPC (Y/N):	D	ate:			St	° * <b>\</b>	IR2*
Sequence ID/ Work Center II	D	Operation Description	001005 4.1	Set Up/ Run Hours	Tool ID	Tool#		Accept Oty	Reject Qty	Reject Numbe	Insp. r Stamp
*160 *160* HandFinish Hand Finishing		Chemical Conversion Con	at per QS1005 4.1	0.00				42	94	<u>613°</u>	3-8
170 *170* QC Quality Control		QC3- Inspect Part Finish Memo		0.00 BS			(	42			
*180*		Identify as per dwg & Sto	ock Location C - A	0.00				42			
Packaging Packaging		Memo		0.00			_	90-			

NCR: Y	'es	/ No				WORK ORDER NON-O	CON	<b>VFORM</b>	MANCE / UPDATE		·	<del>-</del>	
···											QA Closed:	Date	:
Work Orde	٠					DISPOSITION			AGAIN	ST DE	PARTMENT	/PROCESS	
Part N NCR N	- lo					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Crosstu Machining Small F noforming Finishi Large Fab Composi	ab ng	Rec/Stor	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root		•			Descri	ption of work order update	1	nitial	Action		Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved			·										
	•					F	AUL	T CATE	GORY				
Landin		ear Bending Centre No Cracks Crushed/o Cuffs Heat Trea Inspection Ripples in	Crimped t n Strip in		o/s	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		-1	ion Incomplete ions Incomplete/Unclear enance eled		Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct issing Wrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde		901		*970	∂∩1*							Page	4
Revision ID:	D3065-3			Accept	*N900	040	100	*	Setup	Start Stop	14.	S1* S2*	- Million -
Item Name: Start Date: Required Date: Reference:	Step Spacer 3/01/13 4/08/13	Start Qty: 40.00 Req'd Qty: 40.00	*40* *40*		Cust Item II Customer:	D:					"IN.		
Approvals:		n:	Date:	Tooling:		ıte:			Run	Start Stop		R1*	
	QC:		Date:	SPC (Y/N):	Da	ite:					*N	R2*	
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp	
*190 *190* QC Quality Control		QC21- Final Inspection -  Memo	Work Order Release	0.00				M(	,5 <u>_</u>		80-2	1	⊢
										Q(	3-05-	-¥	

NCR: Y	es / N	0			WORK ORDER NON-	COI	NFORN	/ANCE / UP[	DATE	QA Closed:	Date	2:
Work Orde	r:			,	DISPOSITION	-			AGAINST DE	PARTMENT		
Part N NCR N					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining Moforming Marge Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root Cause	Dat	Step	Qty		ption of work order update or Non-conformance	1	Initial nief Eng	Act Descr	ion iption	Sign & Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved						:AUI	LT CATE	GORY				
Landin	ng Gear				General							
	Bendir Centre Cracks Crushe Cuffs Heat T Inspec Ripple	Not Conce od/Crimped reat tion Strip in	n Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread Offset	ion Incomplete ions Incomplete/U enance eled	Jnclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
, 1	Toron	Mayoc in	Extrusion	1	Drawing	1	10ut of 0	`alibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

## **Picklist Print**

March-01-13 1:49:59 PM

Page 1

Work Order ID:

97901

Parent Item:

D3065-3

Parent Item Name:

Step Spacer

**Start Date:** 3/01/13

Required Date: 4/08/13

**Start Qty: 40.00** 

Required Qty: 40.00

Comments:

IPP: C02.11.01Incorporated D3066-1 IPPKJ/RF

IPP Rev:D Now on Water Jet 06-04-11 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.040 2024-T3 .040 sheet		Purchased	No			100	sf	209.2877	0.2178	9.170528	1/2	13.05	5.05
				<b>Location</b>		Loc Oty	<u>Lo</u>	c Code	i	a <del>6</del> 7			
				MAT022		209.2876922			124	18 (			
				12060	)5	65.8254832				<del></del> -			
				12119	97	57.187894							

31.78

54.494315

122136

123217

											DQA:	Date	2:
NCR: Y	⁄es	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPDATE		OA Clasadi	Date	
<del></del>					<del> </del>			·			QA Closed:	Date	
Work Orde	ar.					DISPOSITION			AGAIN	IST DE	PARTMENT	PROCESS	
Work Orde	٠	<del>.</del>			·	Rework	7		Skid-tube Crosstu	be	1	Water Jet	Engineering
Part N	lo.					Scrap		i	Machining Small F		Pro	d. Eng. Coor.	Quality
	•					Use-as-is	1	Therm	noforming Finishi	ing	Rec/Stor	e/Packaging	Other
NCR N	۱o. <sub>.</sub>	· ·				Work Order Update	]		Large Fab Compos	ite	]	Supplier	
Root					Descri	ption of work order update		Initial	Action	, ,	Sign &	· <del>·</del>	
Cause		Date	Step	Qty	(	or Non-conformance	Cr	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator													
Material	Ш												
Setup	Ш												
Other													
Process						•							
Supplier													
Training													
Unapproved	لسا			<u> </u>								<u> </u>	
							AUI	LT CATE	GORY				
Landir	$\overline{}$	!				General		٦.			٦	г	¬_
	-	Bending			_	Bend	-	Grain	•	$\vdash$	Ovalized		Pressure/Forced
	$\vdash$	Centre N	ot Conce	ntric to	o/s	BOM/Route	1	Hardwa			Over/Under	<u> </u>	Temperature/Cure
	-	Cracks			<u> </u>	Broken/Damaged	_	-1	on Incomplete	 	Part Incorre	F	Weld
		Crushed/	'Crimped		<u> </u>	Burrs	<u> </u>	-{	ions Incomplete/Unclear	<u> </u>	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs				Contamination	_	Mainte			Part Moved		
	_	Heat Trea				Countersink		Mislabe		<u> </u> _	Positioned V		<del></del> 1
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	I		Power Loss/	Surge [	Other
		Dinnloc in	Pond		1	Drill Holes	1	Offcet					

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	97901
Description: Step Spacer	Part Number:	D3065-3
Inspection Dwg: D3065 Rev: B		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.260	+/-0.010	1.257	/		V	TKN-01
3.260	+/-0.010	3.255	1		1/	
5.260	. +/-0.010	5.257	1		V	
6.520	+/-0.010	6.522	V		V	
2.093	+/-0.010	2.100	/		V	
3.936	+/-0.010	3.938	/		V	, , , , , , , , , , , , , , , , , , ,
4.186	+/-0.010	4.188	V		V	
Ø0.129	+0.005/-0.000	0.131	/		V	
Ø1.250	+0.005/-0.000	1.250			V	
Pitch 1.204	+/-0.005	1.207	V		1/	
0.040	+/-0.010	0.040		-	V	
					·	
			oAs			

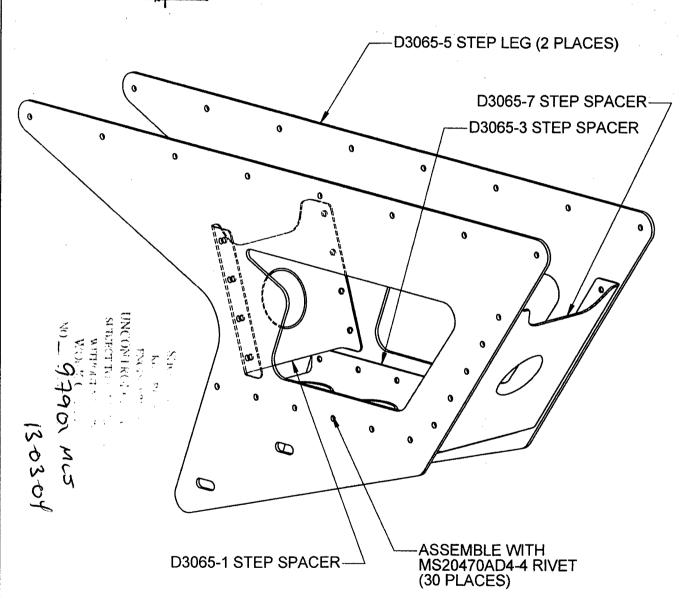
Measured by:	Mal	Audited by:	**	Preliminary Approval:	
Date:	13.05.05	Date:	13.57	Date:	

Rev	Date	Change	Revised by	Approved
Α	04.02.25	New Issue P/O D3065-041	KJ/RF	
В	04.08.12	Removed dimension 1.204	KJ/JLM	
С	06.06.23	Dwg Rev. changed	KJ/JLM	
D	07.09.06	0.040 dimension added	KJ/JLM . A	N1
E	12.10.10	Ø0.129 was Ø0.128	KJ X	T NA



DESIGN A DRAWN BY			DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECK		APPROVED	DRAWING NO.	REV. B	
	PH		D3065	SHEET 1 OF 5	
DATE		)5.23	TITLE	SCALE	
	00.0	J3.23	STEP LEG ASSEMBLY	. 1:2	
Α	0:	2.09.11	NEW ISSUE		
B 06.05.23		6.05.23	ADD 6061-T6 MATERIAL, ADD SLOTS TO D3065-5		

## RELEASED We do 20



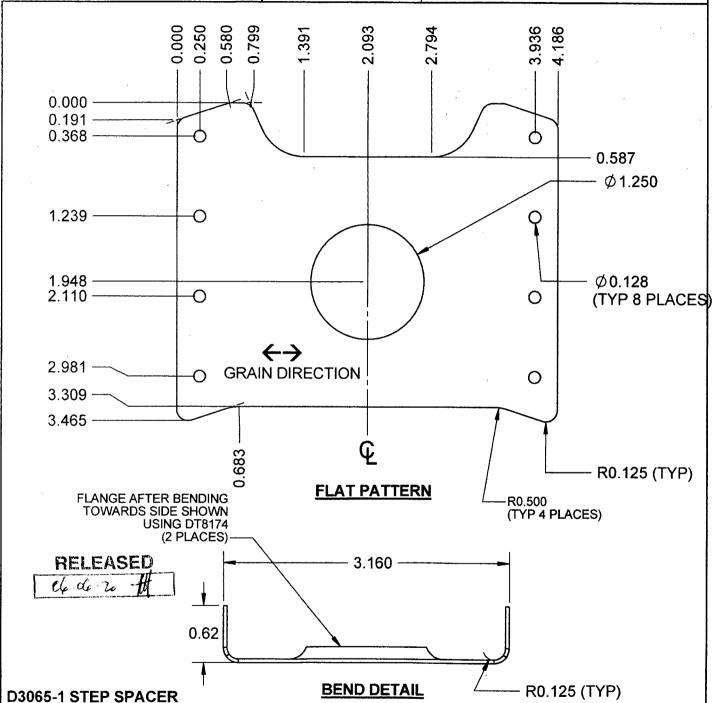
## **D3065-041 STEP LEG ASSEMBLY**

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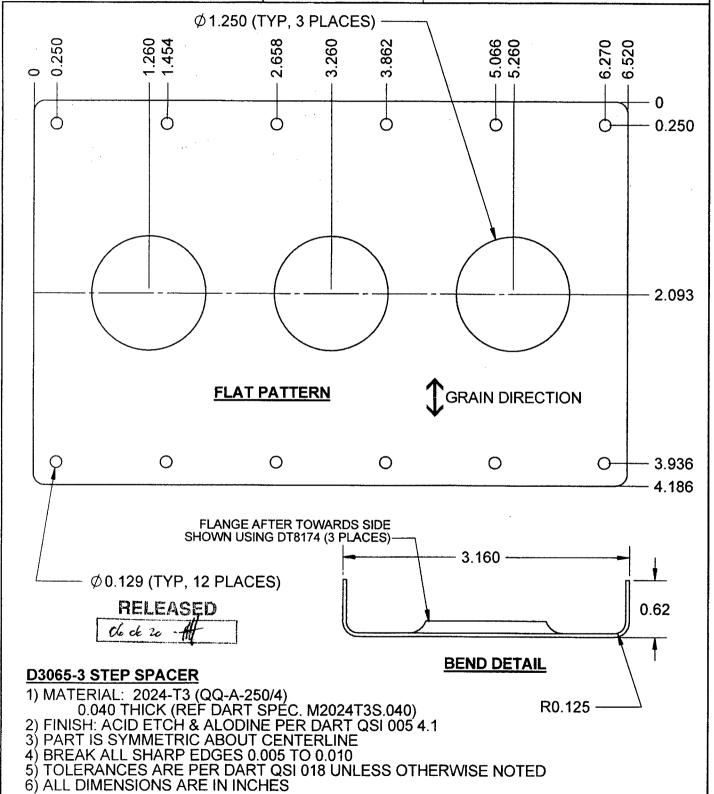
- 1) MATERIAL: 2024-T3 (QQ-A-250/4) 0.040 THICK (REF DART SPEC. M2024T3S.040)
- 2) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

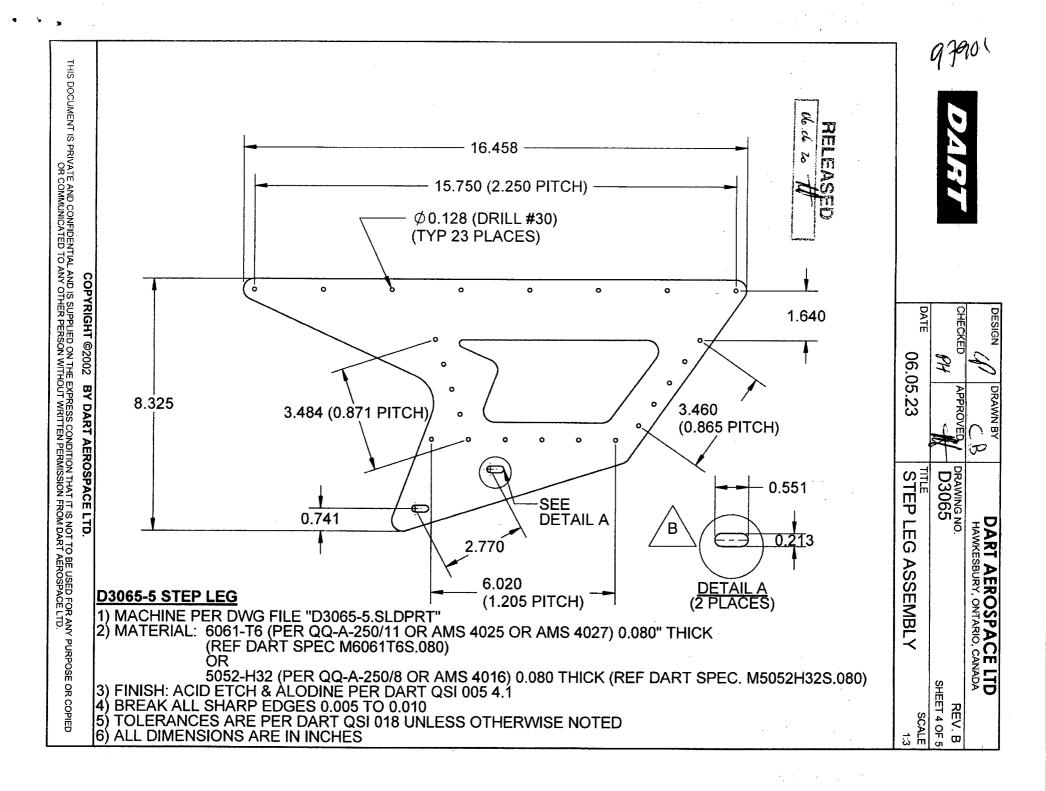
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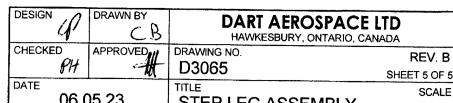


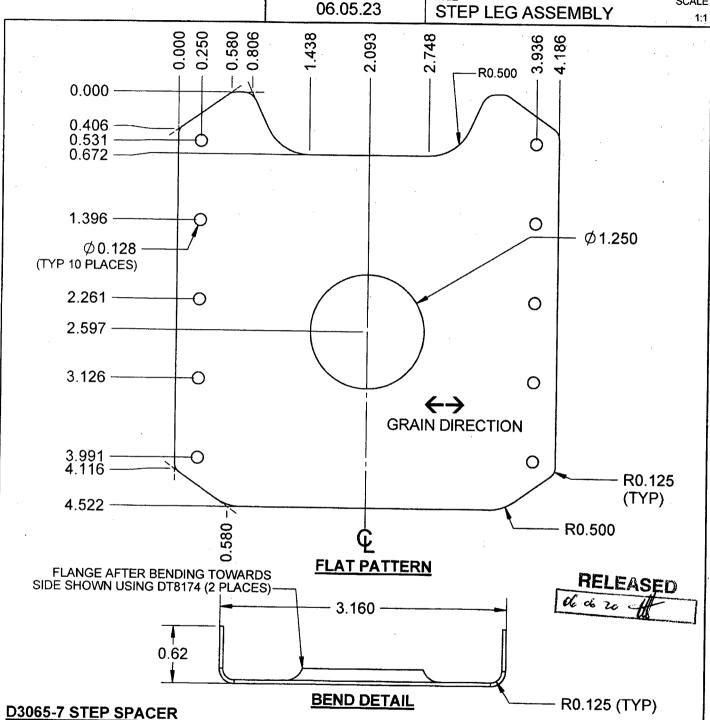












- 1) MATERIAL: 2024-T3 (PER QQ-A-250/4) 0.040 THICK (REF DART SPEC. M2024T3S.040) 2) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
- 3) PART IS SYMMETRIC ABOUT CENTERLINE
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

6) ALL DIMENSIONS ARE IN INCHES

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